

Work Order ID 58112

April 26, 2010 8:28:04 AM



Page 1

Item ID: D2580-1

Accept



Setup Start



Revision ID:

Item Name: 205 Skidtube bent detail

Stop



Start Date: 26/04/2010 Start Qty: 2.00



Cust Item ID:

Required Date: 29/04/2010 Req'd Qty: 2.00



Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date: 10-4-24

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID:

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2580

Rev D

100

0.00



Hand Finish

Memo

0.00

Hand Finishing

1- Inspect mat'l D2500-1-190 for damage.

2- Chemical Conversion Coat as per QSI 005 4.1

2 - - AWM
10-04-29

101

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

2 0 BE19/04/30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Work Order ID 58112

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Page 2

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Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

0.00

Skidtubes

Skidtubes

Memo

0.00

1-Drill pilot holes using drill jig DT 8149 (Do not use cutting fluid)

2-Open holes to 0.500" as per Dwg D2580 without cutting fluid

3-Deburr and blow out all chips from inside of tube

4-Bond web in place per QSI 015.

□□

A/R Sikaflex-291 batch: 112429 □□□

Sikaflex expire date: 10-02-20

Start time: bond for 12hrs

9:00

2

- - AWM

10-05-01

130

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

DP

10-5-4

2

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Work Order ID 58112

April 26, 2010 8:28:04 AM



Page 3

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Setup Start



Revision ID:

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Stop



Start Date: 26/04/2010 Start Qty: 2.00



Cust Item ID:

Required Date: 29/04/2010 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140



Packaging

Identify as per dwg & Stock Location: 4/6

0.00

DP

10-5-4

Packaging

Memo

0.00

150



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

10/05/04
MF
10-5-4

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Picklist Print

April 26, 2010 8:28:03 AM

Page 1

Work Order ID: 58112

Parent Item: D2580-1

Parent Item Name: 205 Skidtube bent detail

Comments: IPP B 01.11.08 Revised Step 9, 10, 12, and 13 SM

Start Date: 26/04/2010

Required Date: 29/04/2010

Start Qty: 2.00

Required Qty: 2.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2500-1-190 Ext'n -T Beam Tube 4"		Manufactured	No				Each	56.0000	2.0000			

Warehouse
Location
Main Warehouse

Loc Qty

Loc Code

52319

56

56

110

Each

2.0000

2.0000

AWM 10-05-01 (2)

D2596



Web, 205 Skidtube

Manufactured No

Warehouse
Location
Main Warehouse

Loc Qty

Loc Code

LG

8

Main Warehouse

LG46

2

57540

2

B-58229

AWM 10-05-01 (2)

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NOTE: Date & initial all entries

DART

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED
07-06-28 #

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 58112

BS10-4-24

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL $\varnothing 0.297$ HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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RELEASED
07-06-28

Diagram illustrating the grinding locations on a propeller cross-section. The diagram shows a cross-section of a propeller with the following labeled areas:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576
- $\frac{1}{4}$

Diagram illustrating the assembly of a circular component with a central hole and a rectangular slot. The diagram includes the following labels and dimensions:

- DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)**: Points to two locations on the outer rim of the component.
- AN3-5A BOLT (1)** and **AN960J10L WASHER (1) (2 PLACES)**: Points to the central hole.
- D2855 CAP**: Points to the rectangular slot.
- SEAL WITH SIKAFLEX-241/-291**: Points to the outer rim of the component.
- 0.208**: Dimension indicating the diameter of the central hole.
- 0.40**: Dimension indicating the width of the rectangular slot.

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

[illegible]

Figure 1: Typical cross-section of a road with a 4% grade. The diagram shows a road profile with a 4% slope. Key dimensions include a 1.4m offset from the centerline to the edge of the road, a 1.0m distance between the hole and the tangent point, a 13.4m distance from the centerline to the hole, a 20.0m distance from the hole to the tangent point, a 32.0 ± 1.0m distance from the centerline to the tangent point, and a 1.0m distance between the hole and the tangent point. A 4% grade is indicated by a triangle with the number 4. A 11m vertical offset is also shown.

0.5

1.5

1.5

D

P

P

P

P

P

P

P

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

WELD AS PER DETAIL B

1.5

1.5

1.5

REFER TO DETAIL C

D3566-1

D3566-5

D3566-1

D3566-13

D3564-11

D3564-5

D3564-9

D3564-13


AN3C4A BOLT (1)

AN960C10L WASHER (1)

(50 PLACES)

DESIGN	4	LOANMAN	BY
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DART AEROSPACE LTD.

 DART AEROSPACE LTD. MARKHAM, ONTARIO, CANADA	
DRAWING NO. D2580	REV. 0 SHEET 2 OF 3
TITLE 205 SKIDTUBE ASSEMBLY	
	SCALE 1:24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

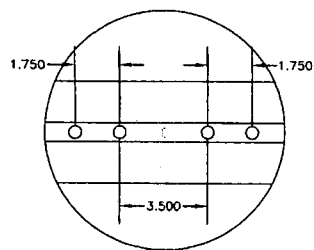
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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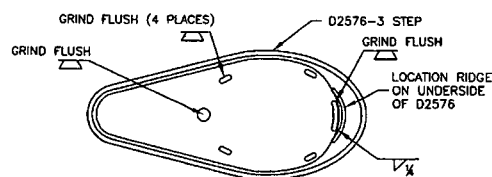
NOTE: Date & initial all entries

DETAIL E
SCALE 5:24

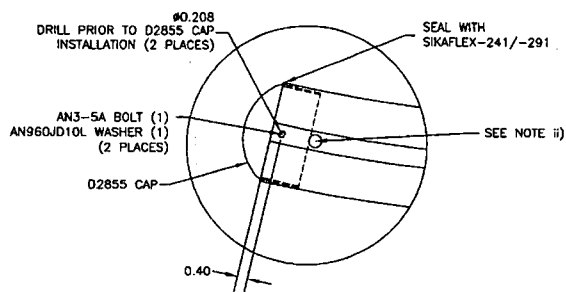


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07.06.28

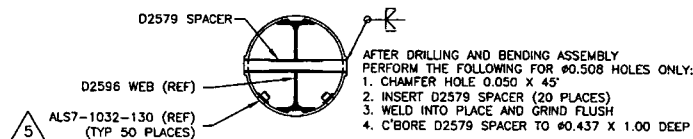
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SCALE 5:24



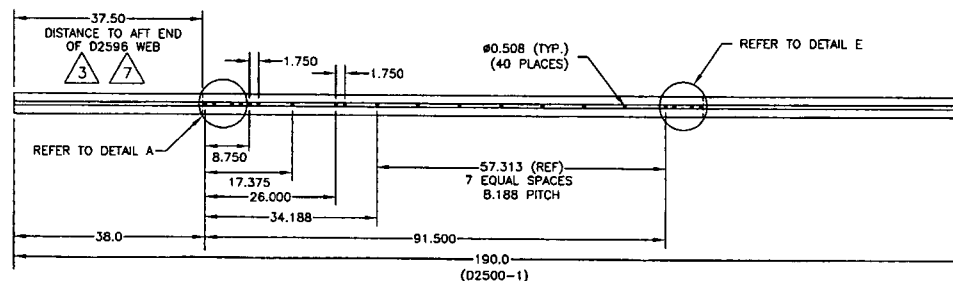
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SCALE 5:24



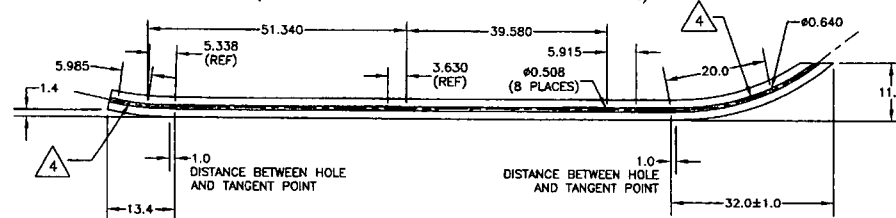
SECTION H-H
SCALE 5:24



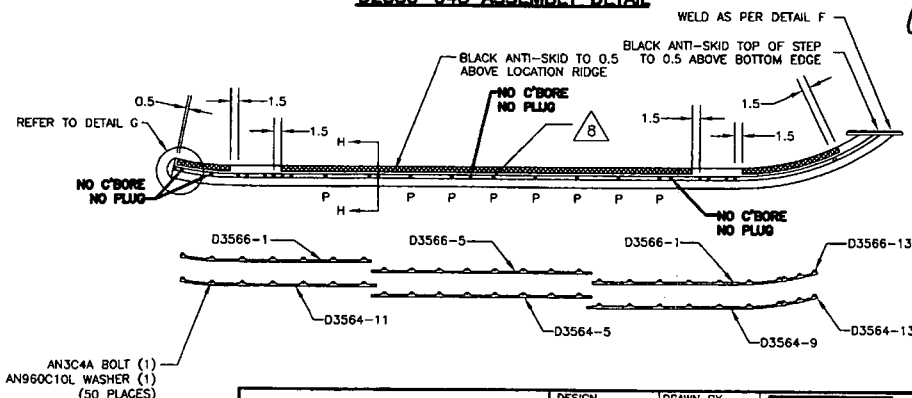
D2580-1 DRILLING DETAIL



D2580-5 BENDING AND CUTTING DETAIL
(MAKE FROM D2580-1 DRILLING DETAIL)



D2580-045 ASSEMBLY DETAIL



u/o 58112

D2580-045 NOTES

- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

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DESIGN R/H	DRAWN BY R/H	DART	DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA
CHECKED H	APPROVED H	DRAWING NO. D2580	REV. 0 SHEET 3 OF 3
DATE 07.02.27	TITLE 205 SKIDTUBE ASSEMBLY	SCALE 1:24	

W/O:		WORK ORDER CHANGES					
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